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Learning Objectives

You'll know the straightforward facts:

- Epidemiology of prescription drug misuse and dependence
- Indications and adverse effects of the most commonly abused prescription drugs
- Detox and treatment

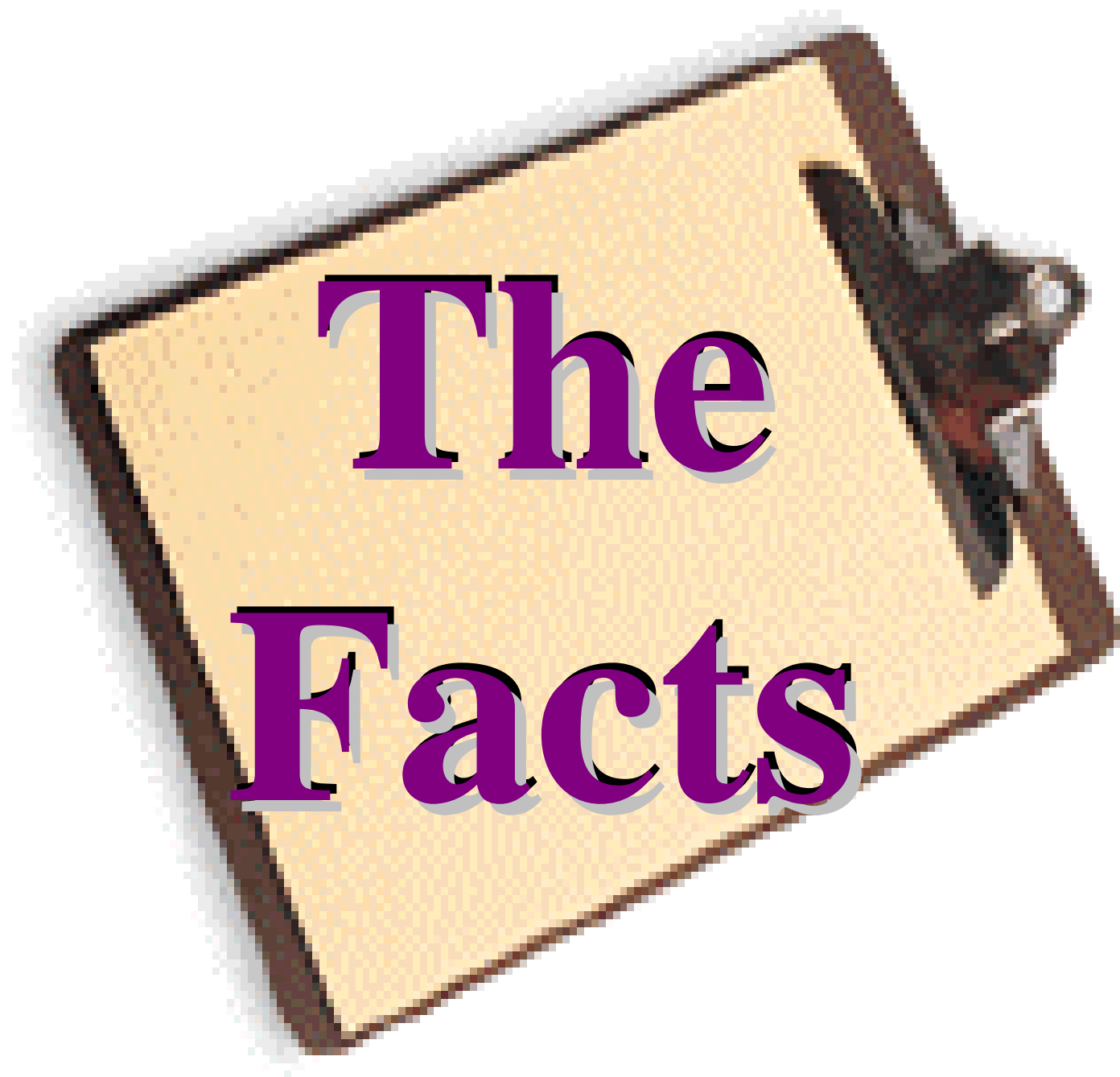


Learning Objectives

You'll understand the complexities:

- The double-edged sword of potentially addictive prescription medications
- Ways to optimize benefit and reduce harm from potentially addictive prescription medications

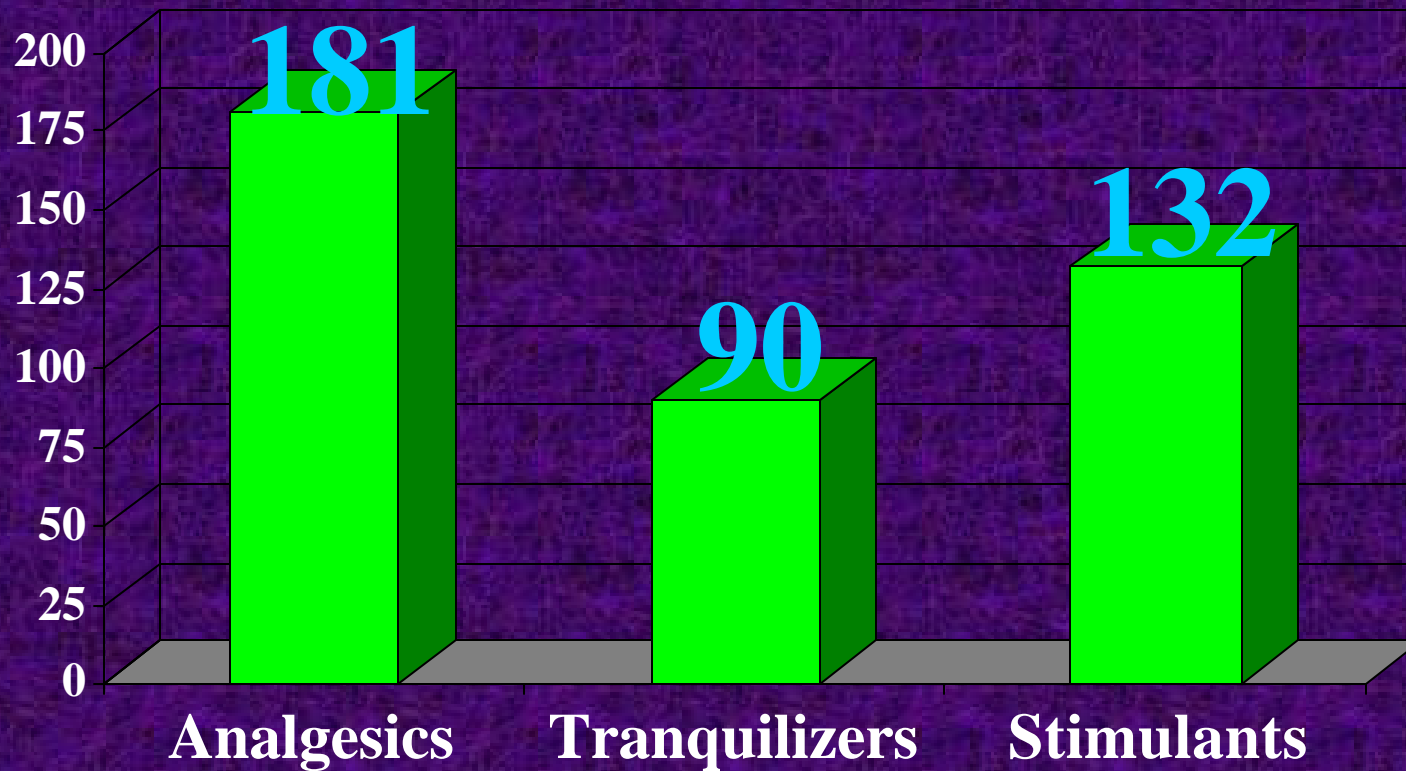




The Most Frequently Abused Prescription Medications

- **Opioid analgesics**
- **CNS depressants**
(hypnotics, sedatives, tranquilizers)
- **Stimulants**
- **Anabolic steroids**

% Increases in Prescription Drug Misusers: 1990 to 1998



Prevalence of Prescription Drug Misuse - Past Month - 1999

4 million Americans (2% of Americans of age 12 or older) used prescription drugs for non-medical reasons in the past month:

- Analgesics 2.6 million**
- Sedatives/Tranquilizers 1.3 million**
- Stimulants: 0.9 million**



The Elderly

- Prescription drugs may be the most commonly abused drugs
- Benzodiazepines are often prescribed unsafely
- Sedatives/tranquilizers are especially dangerous for alcohol users



Adolescents and Young Adults

- Exhibited highest increases of non-medical prescription drug use in the 1990's
- Methylphenidate (Ritalin) use by high school seniors:

0.1% in 1992

2.8% in 1997



Gender Differences



- Females are more frequently prescribed abused prescription drugs
- Adult men and women have similar rates of non-medical prescription drug use
- Adolescent females have higher rates of non-medical use than adolescent males



Gender Differences



Rates of addiction
for drug users

Analgesics

♀ = ♂

Hypnotics

♀ > ♂

Sedatives

♀ > ♂

Tranquilizers

♀ > ♂

Opioids



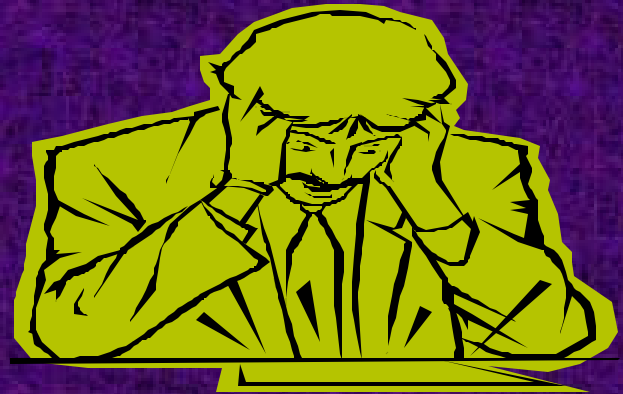
- Indications: pain, cough, diarrhea
- Examples:
 - Oxycodone (Percocet, OxyContin)
 - Hydrocodone (Vicodin)
 - Codeine (Tylenol #3, Robitussin AC)
 - Hydromorphone (Dilaudid)
 - Meperidine (Demerol)
 - Diphenoxylate (Lomotil)

Opioids



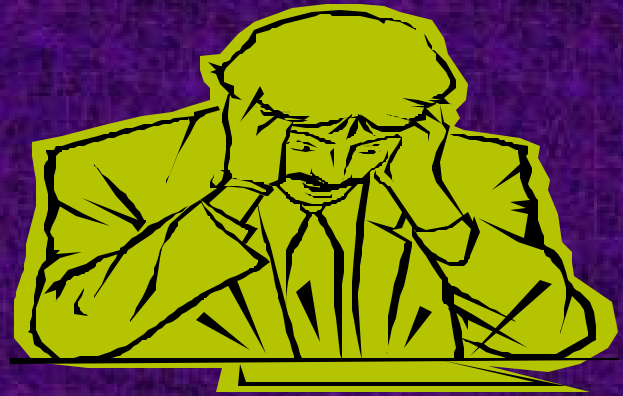
- Short-term effects:
analgesia, drowsiness, constipation,
respiratory depression
- Long-term effects:
physical dependence
no organ damage

CNS Depressants



- Indications: anxiety disorders (GAD, panic disorder), sleep disorder, seizure disorder*
- Benzodiazepines:
diazepam (Valium), alprazolam (Xanax),
triazolam (Halcion), estazolam (ProSom)
lorazepam (Ativan), oxazepam (Serax)
chlordiazepoxide (Librium, Librax)
- Barbiturates:
butalbital (Esgic, Fiorinal), *phenobarbital

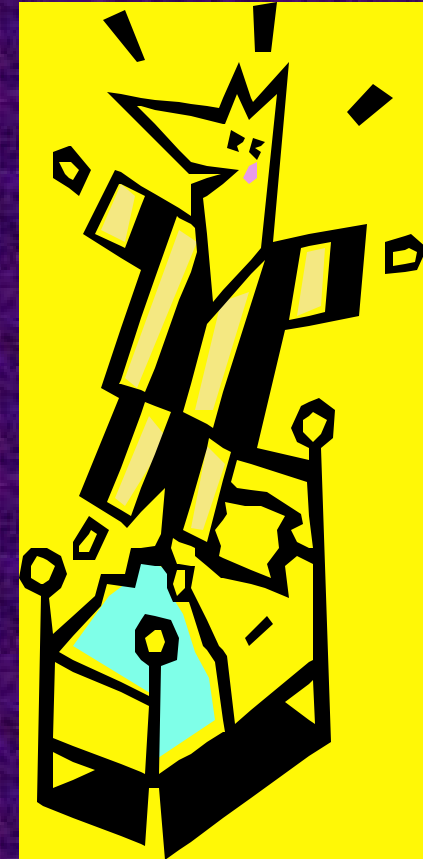
CNS Depressants



- Short-term effects: drowsiness and poor coordination - usually fade in time
- Long-term effects: physical dependence, no organ damage

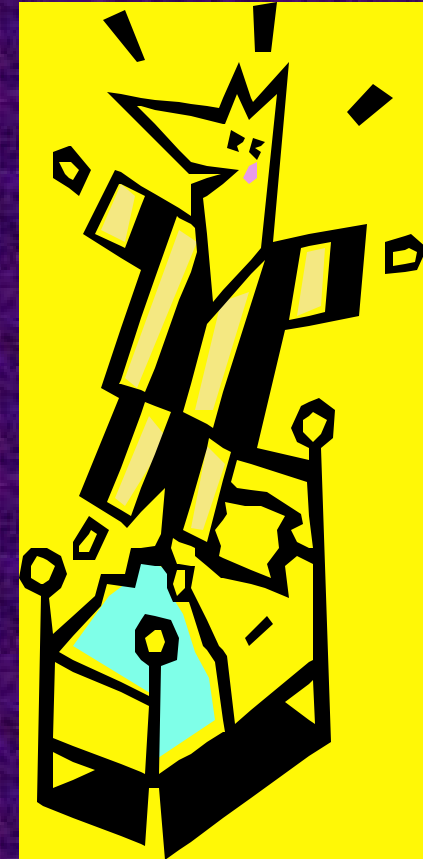
Stimulants

- Indications: ADD, ADHD, narcolepsy, recalcitrant depression, obesity
- Examples:
methylphenidate (Ritalin)
dextroamphetamine (Dexedrine)
sibutramine (Meridia)



Stimulants

- Short-term effects - elevated blood pressure, increased heart rate, decrease in appetite, sleep interference, cardiac arrhythmias, hyperpyrexia, seizures, paranoia
- Long-term effects - no organ damage



Anabolic Steroids



- Indications: Delayed puberty, testosterone deficiency, body wasting with chronic diseases
- Examples: methyltestosterone, nandrolone, oxandrolone, stanozolol

Anabolic Steroids



- Effects: enhanced muscle mass, jaundice, liver tumors, high blood pressure and cholesterol, acne, tremor, irritability, hostility, violence
- Men: testicular atrophy, reduced sperm count, infertility, baldness, breast enlargement
- Women: facial hair, baldness, menstrual abnormalities, deep voice

Anabolic Steroid Misuse



- Most steroid misusers are male
- In 2000, prevalence of past-year use was:
 - 1.7% for 8th graders
 - 2.2% for 10th graders
 - 1.7% for 12th graders



Detoxification

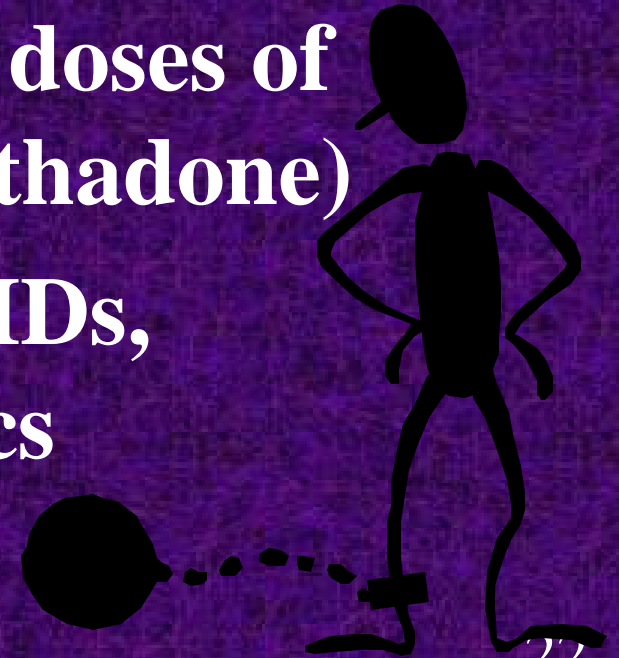
- Precedes addiction treatment
- Relieves withdrawal symptoms
- Prevents complications from withdrawal





Opioid Detoxification

- Not life-threatening
- Can be very uncomfortable
- May treat with tapering doses of a long-acting opioid (methadone)
- May use clonidine, NSAIDs, anti-diarrheals, hypnotics





Sedative Detoxification

- May cause fatal seizures
- May be treated with long-acting benzodiazepines or barbiturates
- Detox may require several weeks
- Cognitive-behavioral therapy can augment coping during detox





Stimulant Detoxification

- Is never fatal
- Symptoms are depressive
- There are no known effective medicines



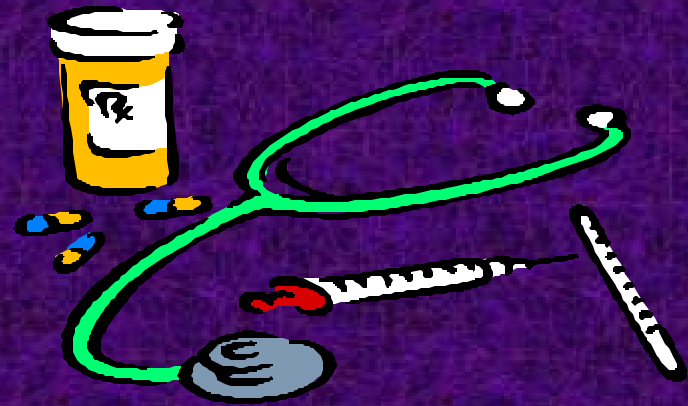
Treatment

**Behavioral treatments
are the mainstay**

- Individual counseling
 - Cognitive-behavioral therapy
 - Relapse prevention
- Psychoeducation
- Group counseling
- Family counseling
- Self-help groups



Treatment



- **When available, pharmacologic treatment can help**
- **A combination of behavioral and pharmacologic treatment is best**
- **Methadone, LAAM, or buprenorphine is effective for opioid analgesic dependence**



The Complexities

Initial Reaction

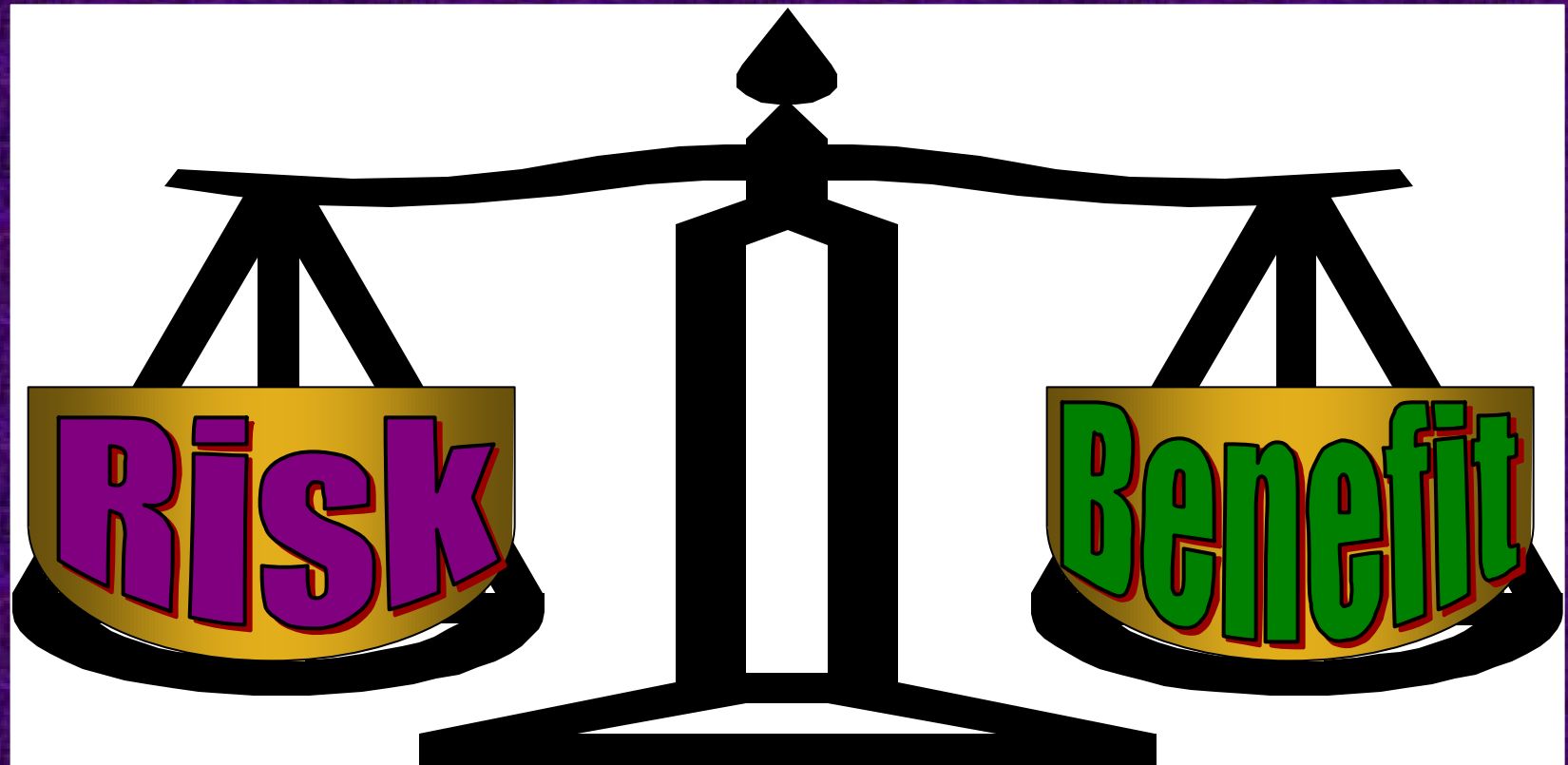
Ban the drugs!



Results



Prescribing



Excessive/Inappropriate Prescribing

- More prescription drug addiction, abuse, diversion

Underprescribing

- More suffering and dysfunction from various medical conditions
- More self-medication with alcohol and illicit drugs, leading to more abuse and addiction

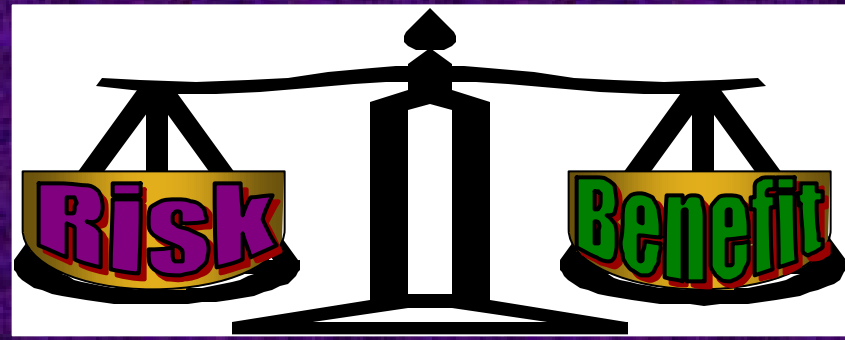
Addicts

- Use meds initially to alter mood
- Later, for cravings and physical dep.
- Preoccupied with obtaining drugs

Pseudoaddicts

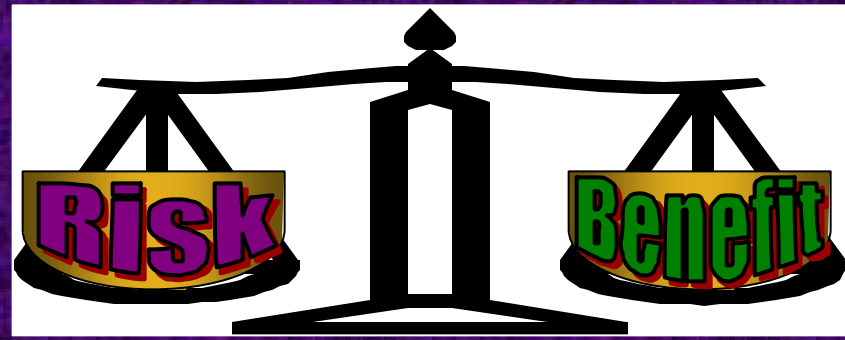
- Use solely for symptom control
- Doctor-shop, manipulate, hoard, etc., because of undertreatment

Optimizing Prescribing



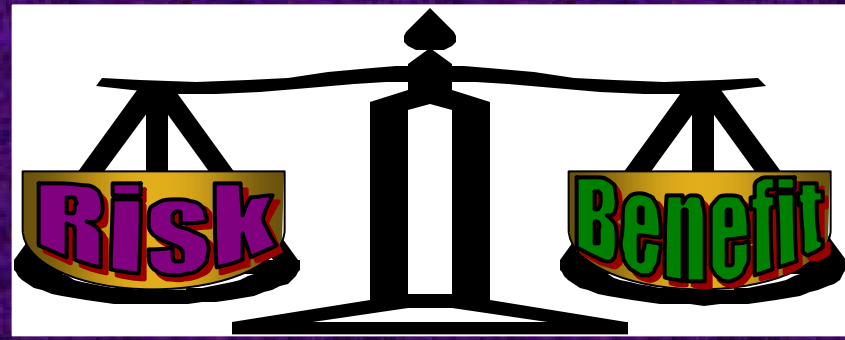
- Accurate assessment:
 - Origin of symptom
 - Complicating social factors
 - Substance use history
- Previous treatments and results:
 - Verify through medical records

Optimizing Prescribing



- Try non-pharmacologic treatments and non-addictive meds first, if appropriate
- Include other treatments along with potentially addictive meds
- Prescribe adequate doses of potentially addictive meds

Optimizing Prescribing



Use meds with lowest addiction potential

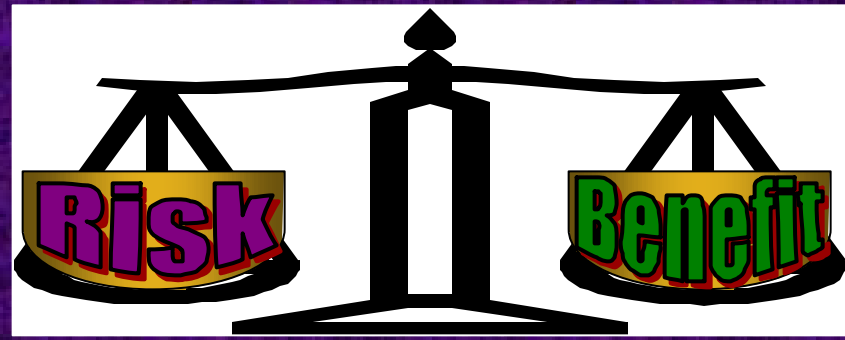
- Long-acting, slow onset
- More secure delivery systems
- Not in vogue

Use meds that are easily monitored, eg,
urine drug screens

Safer Pharmaceuticals

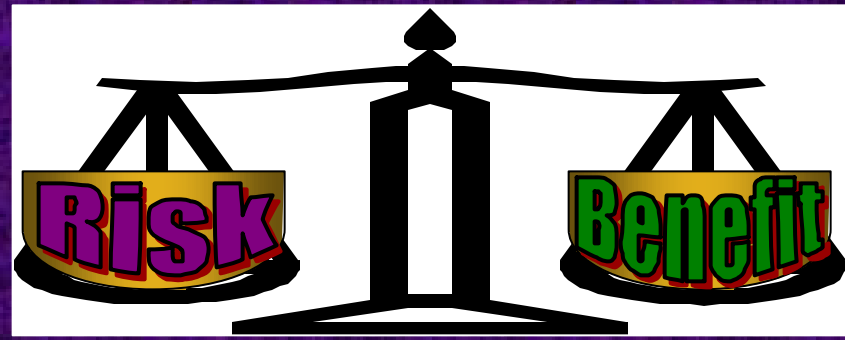
- **Pain:**
Fentanyl patch (Duragesic)
Extended-release morphine
(MS-Contin)
Methadone
- **Anxiety:** **clonazepam (Klonopin)**
- **AD(H)D:** **Ritalin-SR, Adderal-SR**

Optimizing Prescribing



- Use a medication agreement
 - One prescriber, one pharmacy
 - No early refills
 - No replacement of lost prescriptions
 - Periodic, random urine drug screens
 - Consent to check for unauthorized meds
 - Required additional treatment
 - Responses to violations

Optimizing Prescribing



Monitor treatment

- Is the patient adherent to the medication agreement?
- Do prescriptions last as intended?
- Does function improve?
- Do others observe improvement?

Barriers to Implementing Optimal Treatment Plans

- **Confidentiality and unavailability of collateral reporters**
- **Insufficient financing for long-acting meds and non-pharm. Treatments**
- **Inadequate training of health care professionals**
- **Inadequate research**

Summary

- **Prescription drug abuse is increasing**
- **Treatments are similar to those for other substance use disorders**
- **Commonly abused prescription drugs are also legitimate, effective treatments**
- **For those who need such treatments, measures can be taken to minimize addiction, abuse, and diversion**